

**MAGNETIC SEPARATOR FOR LINEAR DISPERSION AND METHOD  
FOR PRODUCING THE SAME**

Abstract of the Disclosure

5 A magnetic sector for charged particle beam transport that includes a magnetic field profile that achieves a linear dispersion from a collimated beam of charged particles proportional to their mass-energy-to-charge ratio. In one embodiment, the field profile necessary for the linear dispersion is obtained by the use of shaped, highly permeable poles powered by permanent magnets or electromagnetic coils.

203110-1682500T